

10. (previously presented) The protective circuit according to claim 4 further comprising an electrical connection between the module (B1) and the circuit part (A1).

11. (new) The protective circuit according to claim 1 wherein driver modules are being protected by the protective circuit.

### **REMARKS**

Claims 1 through 10 continue to be in the case.

New claim 11 is being introduced.

New claim 11 is based on the language of claim 1

The Office Action Summary places a cross under point 13 c) that “None of the priority documents have been received”. It is believed that this marking is in error and that point 13 a) should be marked instead. All priority documents should have been received from WIPO in Geneva.

Acknowledgement that "all" priority documents have been received is respectfully requested.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Applicant is providing an Abstract of the Disclosure on a separate sheet with this submission.

The application does not contain a copy of the Priority document.

Applicant understands that priority documents are furnished in this type of application by the World Intellectual Property Organization.

Claims 1-10 stand objected to because of the following informalities: There are many instances of lack of antecedent basis within the claims. For example, in Claim 1, there is a lack of antecedent basis for "the feed line", "the general supply line", "the lower disposed supply potential", "the supply

voltage". Due to the numerous lack of antecedent basis problems, Applicant is advised to check all claims carefully. Claim 6 has a lack of antecedent basis for "the neutral conductor". Appropriate correction is required.

Claims 1-10 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is confusing in general. The metes and bounds of the claim are not known with the phrase "in particular driver modules". Claim 1 initially recites "a protective diode" being disposed in the feed line, but later recites "a first protective diode ... is disposed in the feed line"; are these the same diodes? What is meant by "for circuit parts predisposed to the module and fed by the lower disposed supply potential"? What is meant in Claim 2 by "diode is furnished in a presence of several modules"? Is not the "a common first protective diode" of Claim 2, already recited within Claim 1? What is meant by "a second protective diode is coordinated to each module"? What is meant by "in case of proper polarity of the supply voltage in the forward direction" in Claim 4? What is exactly meant by "circuit parts predisposed to the modules"? From the Figures is it difficult to determine whether the "a protective diode" and the "a first protective diode" in Claim 4 are two separate diodes? Does

Claim 5 add an additional "first protective diode"? Again, but in claim 5 this time, what is meant by "furnished in a presence of" and "is coordinated to each"? Claims 6-9 discuss a neutral conductor and connections to the conductor. However, in the figures, such connections appear to be to ground (GND). Which way are the connections?

The present amendment amends the claims to avoid the rejection.

Claims 1-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (3,675,141). As best as the claim language can be understood, the following rejection has been provided. Adams discloses various modules and as seen in Figure 4, the modules (more than one for Claims 2 & 5) have protective diodes (185, 186 and 187) connected between them and an output line. Resistors (257-262) are considered to be load resistors.

Although GND is applied to terminal (132), the line at 139 is an output line. Between circuit part (246) and the modules is a first protective diode (198) with its cathode leading to the lower supply potential GND. Diodes are

well known to offer isolation between differing potentials and as such, in view of Adams, it would have been obvious to apply their use between modules and GND potential as a means to buffer or isolate the modules from the supply line, thereby gaining in safety. This helps to prevent havoc resulting from an unintentionally applied voltage to the circuit resulting in damages. Official notice is taken for (Claims 7-9) the use of resistors and capacitors and Zener diodes being coupled between supply and a neutral so as to offer additional protection from transients. Such is well known in the protection art and it would have been obvious to apply the teachings to any circuit having supply and neutral conductors and wherein additional transient protection was desired, resulting in a more reliable and durable end product.

Apparently the reference Adams teaches a discrete constructed output stage as shown in Fig. 3 of the Adams reference. Transistors stages (175, 177, 179) are connected in parallel in this output stage for increasing power and for increasing stability. Diodes (for example diode 185, 186, 187) are employed in order to decouple the transistor stages from each other and in order to prevent cross currents between the individual stages. This circuit results according to the state of the art as well as according to the necessities of circuitry relative to a problem free functioning. The recited reference always teaches an output,

which output can be influenced in its properties (current, voltage) by corresponding circuitry.

The present invention furnishes the protection of a circuit with integrated components, where the circuit can have several outputs. An undefined and undesired behavior occurs in case of a breakage of a zero conductor based on parasitic internal resistances in these driver components symbolically represented in Fig. 1 of the present application by reference characters  $R_{i1}$  ...  $R_{i4}$ , wherein the undefined and undesired behavior can be positively influenced by separation of logic and each driver component. This separation is accomplished with several diodes. In general such protection mechanism is performed by only one diode, and this protection by one diode is usually also sufficient.

The placing of the diode into the GRD ground connection of the device component as well as the switching on is associated with several advantages relative to the dimensions of the diode. The mis-polarity protection diode can be constructed by a multiple

smaller and thereby also more cost-effective by having the output current of the driver components not flowing through the mispolarity protection diode.

The control input A1 (Fig. 1 of the present application) is symbolic and can vary according to apparatus and construction.

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

Dirk Tillenburg

By:



Horst M. Kasper, his attorney  
13 Forest Drive, Warren, N.J. 07059  
Telephone: (908)757-2839  
Telefax: (908)668-5262  
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